

East Asian Science, Technology, and Medicine

Number 27
2007

A journal dedicated to the study of traditional and modern
East Asian science, technology, and medicine.

Editor:

Hans Ulrich Vogel

Asien-Orient-Institut
Abteilung für Sinologie und Koreanistik
Eberhard Karls Universität Tübingen
Wilhelmstr. 133
72074 Tübingen / Germany
FAX: 0049 - 7071 - 295733
E-Mail: eastm@uni-tuebingen.de

Managing and Production Editors:

Vanessa Dahlmann, Abteilung für Sinologie und Koreanistik, Tübingen
Valerie Keppel, Abteilung für Sinologie und Koreanistik, Tübingen
Katharina Markgraf, Abteilung für Sinologie und Koreanistik, Tübingen

English Language Editor:

John P. C. Moffett, Needham Research Institute, Cambridge (UK)

Local Advisory Board:

Klaus J. Antoni, Abteilung für *Japanologie*, Tübingen
Song Moon-Ey, Abteilung für Sinologie und *Koreanistik*, Tübingen
Viktoria Eschbach-Szabo, Abteilung für *Japanologie*, Tübingen
Robert Horres, Abteilung für *Japanologie*, Tübingen
Achim Mittag, Abteilung für *Sinologie* und *Koreanistik*, Tübingen

EDITORIAL COMMITTEE

- Bridie Andrews-Minehan, *Department of History, Bentley College*
Francesca Bray, *Department of Social Anthropology, University of Edinburgh*
Christopher Cullen, *Needham Research Institute and Darwin College,
Cambridge*
Benjamin A. Elman, *East Asian Studies and History, Princeton University*
Charlotte Furth, *Department of History, University of Southern California,
Los Angeles*
Hashimoto Keizō, *Faculty of Sociology, Kansai University, Osaka*
Huang Yi-Long, *Institute of History, National Tsing Hua University, Hsinchu*
Jeon Sang-woon, *Cultural Properties Committee Korea, Seoul*
Catherine Jami, *Centre National de la Recherche Scientifique, Paris*
Yung Sik Kim, *College of Humanities, Seoul National University*
Dieter Kuhn, *Institut für Kulturwissenschaften Ost- und Südasiens - Sinologie,
Universität Würzburg*
Angela Ki Che Leung, *Sun Yat-Sen Institute for Social Sciences and Philosophy,
Academia Sinica, Taipei*
Liu Bing, *Institute of Science, Technology and Society, Tsinghua University,
Beijing*
Liu Dun, *Institute for the History of Natural Science, Academia Sinica, Beijing*
Morris Low, *Department of the History of Science, Medicine, and Technology,
Johns Hopkins University*
Georges Métailié, *Centre Alexandre Koyré, CNRS-EHESS-MNHN, Paris*
Shi Yunli, *Department of the History of Science and Scientific Archaeology,
University of Science and Technology of China, Hefei*
Nathan Sivin, *Department of the History and Sociology of Science, University of
Pennsylvania, Philadelphia*
C. Michele Thompson, *Department of History, Southern Connecticut State
University, New Haven*
Tsukahara Togo, *History and Philosophy of Science, Technology and Medicine,
Kobe University*
Paul U. Unschuld, *Horst-Götz-Stiftungsinstitut für Theorie, Geschichte und Ethik
Chinesischer Lebenswissenschaften, Charité, Berlin*
Donald B. Wagner, *Department of Asian Studies, University of Copenhagen*
Yoshida Tadashi, *Center for Northeast Asian Studies, Tohoku University, Sendai*

THE SCOPE OF *EASTM*

Copyright © 2007. *EASTM* (formerly *Chinese Science*) is published by the International Society for the History of East Asian Science, Technology, and Medicine (ISHEASTM). Numbers 1-10 (1975-92) were published irregularly under the editorship of Nathan Sivin (University of Pennsylvania). Numbers 11-15 (1993-98) were issued annually at the University of California, Los Angeles, by Benjamin A. Elman. Beginning with Number 16 (1999), the name of the journal changed to *East Asian Science, Technology, and Medicine* and is published at the University of Tübingen, Germany. From 2003 to 2008 two issues per annum have been the norm, however, only one issue per annum will be published from 2009 onwards.

The publication of this periodical is supported by a grant from the *Deutsche Forschungsgemeinschaft* (DFG).

This journal includes studies on the science, technology, and medicine of traditional and contemporary East Asia. Any study based on original research using Chinese, Japanese, or Korean primary sources or artifacts, that elucidates the relationships and interactions of science, technology, and medicine with politics, society, economics, philosophy, culture, religion, historiography, as well as their disciplinary traditions, or throws light on the work of scientists, technologists, and physicians in East Asia will gladly be considered.

SUBMISSIONS

Potential contributors are encouraged to correspond with the editor before submitting manuscripts in order to ensure that their work falls within the purview of *EASTM*, and to simplify the preparation of the final copy. All contributions except invited reviews are refereed. The editor does not referee. For Chinese romanization, both Pinyin and Wade-Giles transcriptions are accepted, while for Japanese and Korean, the Hepburn and McCune/Reischauer systems are to be used. With regard to style and format, contributors should refer to the latest issue of *EASTM*. Information on the preparation of manuscripts and their submission in electronic form will also be provided on request.

SUBSCRIPTIONS FOR 2008-2010:

INDIVIDUAL RATE (automatically confers ISHEASTM membership), four issues (two in 2008, one each in 2009 and 2010), postage paid (surface mail) anywhere: normal rate € 90.00 or US\$ 125.00; special rate for graduate students, post-docs within first five years from PhD, or retired: € 12.00 or US\$ 17.00.

INSTITUTIONAL RATE, four issues (two in 2008, one each in 2009 and 2010), postage paid (surface mail) anywhere: € 110.00 or US\$ 155.00; single issues, postage paid (surface mail) anywhere: € 30.00 or US\$ 43.00.

BACK ISSUES: Members of the Society (which includes all individuals holding a subscription) may purchase back issues at a special rate: € 15.00/US\$ 20.00 for single issues. The issues no. 1-11 of *Chinese Science* are out of print, but can be downloaded at <http://www.uni-tuebingen.de/sinologie/eastm>. An entire set of remaining back issues (i.e. nos. 12-15 of *Chinese Science* and nos. 16-25 of *EASTM*) is available to subscribers at € 195.00/US\$ 270.00.

Send orders or inquiries to: ISHEASTM/SIHSTMAO, Institut d'Extrême-Orient, att.: Vera Dorofeeva-Lichtmann, 52 rue du Cardinal Lemoine, 75231 Paris Cedex 05, France. Fax: 33/1/44271854. E-Mail: vera.lichtman@free.fr

Subscriptions will remain in force until terminated, and will normally be billed in advance for **three years**. Checks should be payable to: "S.I.H.S.T.M.A.O." Subscribers are requested to notify the editorial office of any changes in address, and to pay the invoice, which will be enclosed in the issue prior to the expiry of the subscription, promptly. Payment of subscriptions also enrolls individuals (including students and retirees) as members of the Society for three years.

NOTICE TO LIBRARIES

Please note that from Number 11 (1993) *Chinese Science/EASTM* was published annually, then from 2003 to 2008 there have been two issues of EASTM per annum, while in the period 2009-2011 only one issue per year will be published.

BACK ISSUES

Issues of *Chinese Science/EASTM* normally remain in print for three or four years. At the moment sufficient copies of Numbers 12-26 are still available. Numbers 1-11 are out-of-print, but can be downloaded as PDF files at <http://www.uni-tuebingen.de/sinologie/eastm>.

HOME PAGE

For more information on the journal please also consult the home page maintained at Tübingen University: <http://www.uni-tuebingen.de/sinologie/eastm>

ISHEASTM

The publication, since the fifties, of Joseph Needham's (1900-1995) monumental work, *Science and Civilisation in China*, has been followed by a rapid development of research on the history of science, technology, and medicine in China, as well as in civilisations upon which Chinese culture exerted an important influence, such as Japan, Korea, and Vietnam. Since 1982, International Conferences on the History of Science in China had been held at irregular intervals. At the sixth of these conferences, held in Cambridge in 1990 in honour of Joseph Needham's ninetieth birthday, participants agreed to found the International Society for the History of East Asian Science, Technology, and Medicine (ISHEASTM).

The Society's purpose is to serve, represent and speak for scholars of the field defined by its name. It aims, primarily, to promote contacts and exchanges between those scholars, and also to establish and reinforce links with other scholarly communities, at an international level. The Society's activities include:

- The organisation of a plenary meeting every three years (Kyoto 1993, Seoul 1996, Singapore 1999, Shanghai 2002, Munich 2005, Baltimore 2008);
- The publication of a journal, *EASTM*;

For more information on the society please consult the home page maintained at the Needham Research Institute in Cambridge: www.nri.org.uk/ISHEASTM.html

This journal is printed on acid-free paper.

ISSN #1562-918X